Listing of the Claims

1. (currently amended) A glassy chiral-nematic liquid crystal composition comprising a compound having a 1, 3, 5-benzenetricarbonyl central moiety, <u>said</u> composition being characterized by a morphologically stable cholesteric phase and said compound having the structural formula

wherein each N represents a nematic group connected to said central moiety by a carboxylic ester linkage and Ch represents a chiral group connected to said central moiety by a carboxylic ester linkage.

- 2. (original) The composition of claim 1 wherein said nematic group N includes a biphenyl or a terphenyl moiety.
- 3. (original) The composition of claim 2 wherein said nematic group N is a 4-(1-propylene-3-oxy)-benzoic acid 4'-cyanobiphenyl-4-yl ester group or a 3-(4'-cyanop-terphenyloxy)-1-propyl group.
- 4. (original) The composition of claim 1 wherein said nematic group N includes a coumarin moiety.
- 5. (original) The composition of claim 4 wherein said nematic group N is a 4'-(6-hexyleneoxy)-[1,1'-biphenyl]-4-carboxylate acid, 4-(6-coumarin) ester.
- 6. (original) The composition of claim 1 wherein said nematic group N includes a naphthyl moiety.
- 7. (original) The composition of claim 1 wherein said chiral group *Ch* includes an ether or an ester of a chiral alcohol.

- 8. (original) The composition of claim 1 wherein said chiral group *Ch* includes an amide of a chiral amine.
- 9. (original) The composition of claim 8 wherein said chiral group *Ch* includes an (S)- or an (R)-1-(phenylethyl) amide moiety.
- 10. (original) The composition of claim 1 wherein said chiral group Ch includes a (+)-estrone ether or ester moiety.
- 11. (original) The composition of claim 1 wherein said chiral group Ch is an (S)-2'-4-[1-(2-naphthyl)ethoxymethyl]phenyl- 6'-ethyleneoxy-naphthalene group.

12. (original) The composition of claim 1 wherein said chiral and nematic groups are selected from, respectively, the following groups of chiral Ch and nematic N groups

$$n = 2-6$$
; $m = 1-6$

$$Ch = -(CH_2)_nO - COO - COO$$

wherein n represents an integer from 2 to 6 and m represents an integer from 1 to 6.

- 13. (original) The composition of claim 1 wherein said compound is selected from the group consisting of 1,3,5-benzenetricarboxylic acid, 1,3-bis-{3-[4-(4'cyano-biphenyl-4-yloxycarbonyl)-phenoxy]-propyl ester}, 5-{[4-[[4-[(R)-(+)-1-(phenylethyl)]benzamide]-1-oxy]benzoate-1-oxy] ethyl ester} (I-R), 1,3,5-benzenetricarboxylic acid, 1,3-bis-{3-[4-(4'cyano-biphenyl-4-yloxycarbonyl)-phenoxy]-propyl ester}, 5-{[4-[[4-[(S)-(-)-1-(phenylethyl)]benzamide]-1-oxy]benzoate-1-oxy] ethyl ester} (I-S), and mixtures thereof.
- 14. (original) The composition of claim 1 wherein said compound is selected from the group consisting of 1,3,5-benzenetricarboxylic acid, 1,3-bis-{4-[(6-coumarin)-yloxycarbonyl]-4'-biphenoxy] hexyl ester}, 5-{[4-[[4-[(R)-(+)-1-(phenylethyl)]benzamide]-1-oxy]benzoate-1-oxy] ethyl ester} (II-R), 1,3,5-benzenetricarboxylic acid, 1,3-bis-{4-[(6-coumarin)-yloxycarbonyl]-4'-biphenoxy] hexyl ester}, 5-{[4-[[4-[(S)-(+)-1-(phenylethyl)]benzamide]-1-oxy]benzoate-1-oxy] ethyl ester} (II-S), and mixtures thereof.
- 15. (original) The composition of claim 1 wherein said compound is selected from the group consisting of 1,3,5-benzenetricarboxylic acid, 1,3-bis-{[6-(4'-cyanophenyl) 2-naphthyloxy]-1-propyl ester}, 5-{6-[1-[1-(R)-(2-naphthylethyl)oxo]benzyl]-2-naphthyloxy]-1-propyl ester} (III-R), 1,3,5-benzenetricarboxylic acid, 1,3-bis-{[6-(4'-cyanophenyl) 2-naphthyloxy]-1-propyl ester}, 5-{6-[1-[1-(S)-(2-naphthylethyl)oxo]benzyl]-2-naphthyloxy]-1-propyl ester} (III-S), and mixtures thereof.
- 16. (original) The composition of claim 1 comprising a glassy chiral-nematic liquid crystal compound and a glassy nematic liquid crystal compound selected from the group consisting of 1,3,5-benzenetricarboxylic acid, 1,3,5-tris-{3-[4-(4'cyano-biphenyl-4-yloxycarbonyl)-phenoxy]-propyl ester} (IV) and 1,3,5-benzenetricarboxylic acid, 1,3,5-tris-{4-[(6-coumarin)-yloxycarbonyl]-4'-biphenoxy] hexyl ester} (V).

17. (currently amended) An optical device formed from at least one glassy chiral-nematic liquid crystal composition comprising a compound having a 1, 3, 5-benzenetricarbonyl central moiety, said composition being characterized by a morphologically stable cholesteric phase and said compound having the structural formula

wherein each N represents a nematic group connected to said central moiety by a carboxylic ester linkage and Ch represents a chiral group connected to said central moiety by a carboxylic ester linkage.

- 18. (original) The optical device of claim 17 wherein said nematic group N includes a biphenyl or terphenyl moiety.
- 19. (original) The optical device of claim 18 wherein said nematic group N is a 4-(1-propylene-3-oxy)-benzoic acid 4'-cyanobiphenyl-4-yl ester group or a 3-(4'-cyano-p-terphenyloxy)-1-propyl group.
- 20. (original) The optical device of claim 17 wherein said nematic group N includes a coumarin moiety.
- 21. (original) The optical device of claim 20 wherein said nematic group N is a 4'-(6-hexyleneoxy)-[1,1'-biphenyl]-4-carboxylate acid, 4-(6-coumarin) ester.
- 22. (original) The optical device of claim 17 wherein said nematic group N includes a naphthyl moiety.
- 23. (original) The optical device of claim 17 wherein said chiral group *Ch* includes an ether or an ester of a chiral alcohol.
- 24. (original) The optical device of claim 17 wherein said chiral group *Ch* includes an amide of a chiral amine.

- 25. (original) The optical device of claim 24 wherein said chiral group Ch includes an (S)- or an (R)-1-(phenylethyl) amide moiety.
- 26. (original) The optical device of claim 17 wherein said chiral group Ch includes a (+)-estrone ether or ester moiety.

27. (original) The optical device of claim 17 wherein said chiral and nematic groups are selected from, respectively, the following groups of chiral Ch and nematic N groups

$$n = 2-6$$
; $m = 1-6$

$$Ch = -(CH_2)_nO - COO - COO$$

wherein n represents an integer from 2 to 6 and m represents an integer from 1 to 6.

- 28. (original) The optical device of claim 17 wherein said compound is selected from the group consisting of 1,3,5-benzenetricarboxylic acid, 1,3-bis-{3-[4-(4'cyano-biphenyl-4-yloxycarbonyl)-phenoxy]-propyl ester}, 5-{[4-[[4-[(R)-(+)-1-(phenylethyl)]benzamide]-1-oxy]benzoate-1-oxy] ethyl ester} (I-R), 1,3,5-benzenetricarboxylic acid, 1,3-bis-{3-[4-(4'cyano-biphenyl-4-yloxycarbonyl)-phenoxy]-propyl ester}, 5-{[4-[[4-[(S)-(-)-1-(phenylethyl)]benzamide]-1-oxy]benzoate-1-oxy] ethyl ester} (I-S), and mixtures thereof.
- 29. (original) The optical device of claim 17 wherein said compound is selected from the group consisting of 1,3,5-benzenetricarboxylic acid, 1,3-bis-{4-[(6-coumarin)-yloxycarbonyl]-4'-biphenoxy] hexyl ester}, 5-{[4-[[4-[(R)-(+)-1-(phenylethyl)]benzamide]-1-oxy]benzoate-1-oxy] ethyl ester} (II-R), 1,3,5-benzenetricarboxylic acid, 1,3-bis-{4-[(6-coumarin)-yloxycarbonyl]-4'-biphenoxy] hexyl ester}, 5-{[4-[[4-[(S)-(+)-1-(phenylethyl)]benzamide]-1-oxy]benzoate-1-oxy] ethyl ester} (II-S), and mixtures thereof.
- 30. (original) The optical device of claim 17 wherein said compound is selected from the group consisting of 1,3,5-benzenetricarboxylic acid, 1,3-bis-{[6-(4'-cyanophenyl) 2-naphthyloxy]-1-propyl ester}, 5-{6-[1-[1-(R)-(2-naphthyloxy]-2-naphthyloxy]-1-propyl ester} (III-R), 1,3,5-benzenetricarboxylic acid, 1,3-bis-{[6-(4'-cyanophenyl) 2-naphthyloxy]-1-propyl ester}, 5-{6-[1-[1-(S)-(2-naphthylethyl)oxo]benzyl]-2-naphthyloxy]-1-propyl ester} (III-S), and mixtures thereof.
- 31. (original) The optical device of claim 17 comprising a combination of a glassy chiral-nematic liquid crystal compound and a glassy nematic liquid crystal compound selected from the group consisting of 1,3,5-benzenetricarboxylic acid, 1,3,5-tris-{3-[4-(4'cyano-biphenyl-4-yloxycarbonyl)-phenoxy]-propyl ester} (IV) and 1,3,5-benzenetricarboxylic acid, 1,3,5-tris-{4-[(6-coumarin)-yloxycarbonyl]-4'-biphenoxy] hexyl ester} (V).
- 32. (original) The optical device of claim 17 comprising at least one film formed from at least one said glassy chiral-nematic liquid crystal composition.

- 33. (original) The optical device of claim 32 further comprising an optically clear substrate.
- 34. (original) The optical device of claim 32 wherein said film further comprises a nematic liquid crystal compound.
- 35. (original) The optical device of claim 17 selected from the group consisting of a circular polarizer, an optical notch filter, and a reflector.